

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system for identifying priority level information for a data frame received by a network device, comprising:

a plurality of input ports configured to receive a plurality of data frames, each of the received data frames specifying at least one of a plurality of classes of service;

a memory configured to store a plurality of priority levels, level one for information ~~corresponding to each of the plurality of classes of service, wherein the memory includes one of~~ a plurality of registers or a lookup table;

an action generator configured to generate an action tag for each of the received data frames, wherein the action generator includes:

an action memory configured to store a plurality of entries,

a decoder configured to identify one of the entries in the action memory in response to the received data frames, and

a tag generator configured to generate the action tags based on the identified entries; and

a port vector queue configured to use the action tag from the action generator for each of the received data frames to access the memory to retrieve one of the stored priority levels that corresponds to a class of service specified by each of ~~identify the priority level information associated with the received data frames frame.~~

2. (Original) The system of claim 1, further comprising:

a plurality of priority queues associated with each of a plurality of output ports of the network device.

3. (Currently amended) The system of claim 2, wherein the port vector queue is further configured to identify one of the priority queues for each of the received data frames based on

the retrieved one of the stored identified priority level levels information.

4. (Original) The system of claim 1, wherein the memory is preprogrammed with the priority level information.

5-7. (Canceled)

8. (Previously presented) The system of claim 1, wherein each of the entries includes:
a differentiated services code point (DSCP)/priority field configured to store one of DSCP data and priority data relating to one of the classes of service,
a deny field configured to store data indicating whether to drop a corresponding one of the received data frames,
a forward-to-management field configured to store data indicating whether to forward the corresponding data frame to a management device,
a priority field configured to store data indicating whether the DSCP/priority field stores valid priority data, and
a DSCP field configured to store data indicating whether the DSCP/priority field stores valid DSCP data.

9. (Currently amended) A method for identifying priority level information for a data frame received by a network device, comprising:

programming a memory with a plurality of priority levels, one for priority-level information corresponding to each class of service of a plurality of classes of service, wherein the memory includes ~~one of~~ a plurality of registers or a lookup table;

receiving a plurality of data frames, each of the received data frames specifying at least one of the classes of service;

generating an action tag for each of the received data frames, wherein generating an action tag includes:

storing a plurality of entries,

identifying one of the stored entries in response to the received data frames, and
generating the action tags based on the identified entries; and
accessing the memory to retrieve one of the plurality of priority levels that corresponds to a class of service specified by each of ~~identify the priority level information associated with each of the received data frames using the action tags corresponding to the received data frames.~~

10. (Currently amended) The method of claim 9, further comprising:
identifying one of a plurality of priority queues for each of the received data frames based on the retrieved one of the plurality of identified priority level levels information.

11. (Previously presented) The method of claim 9, wherein the memory includes a plurality of registers.

12. (Canceled)

13. (Previously presented) The method of claim 9, wherein each of the entries includes:
a differentiated services code point (DSCP)/priority field configured to store one of DSCP data and priority data relating to one of the classes of service,
a deny field configured to store data indicating whether to drop a corresponding one of the received data frames,
a forward-to-management field configured to store data indicating whether to forward the corresponding data frame to a management device,
a priority field configured to store data indicating whether the DSCP/priority field stores valid priority data, and
a DSCP field configured to store data indicating whether the DSCP/priority field stores valid DSCP data.

14. (Currently amended) A multiport network device, comprising:
a plurality of input ports configured to receive a plurality of data frames, each of the data

frames specifying at least one of a plurality of classes of service;
a plurality of output ports configured to transmit at least some of the data frames;
a plurality of priority queues associated with each of the output ports;
a memory configured to store a plurality of priority levels, level one for information
~~corresponding to~~ each of the plurality of classes of service;
an action generator including
an action memory configured to store a plurality of entries,
a decoder configured to identify one of the entries in the action memory for each
of the data frames, and
a tag generator configured to generate an action tag based on the entry identified
for each of the data frames; and
a port vector queue configured to access the memory to retrieve one of the stored priority
levels that corresponds to a class of service specified by ~~identify the priority level information~~
~~associated with~~ each of the data frames using the action tag from the action generator for the data
frame and identify one of the priority queues based on the identified priority level information
for the data frame.

15. (Currently amended) The multiport network device of claim 14, wherein the memory is configured to be preprogrammed with the plurality of priority levels ~~level information~~ by a host device.

16. (Currently amended) The multiport network device of claim 14, wherein the memory includes a plurality of registers, each of the registers being configured to store one or more of the
priority levels ~~level information~~ corresponding to one or more of the classes of service.

17. (Original) The multiport network device of claim 14, wherein the memory stores a lookup table.

18. (Original) The multiport network device of claim 14, wherein each of the entries

includes:

- a differentiated services code point (DSCP)/priority field configured to store one of DSCP data and priority data relating to one of the classes of service,
- a deny field configured to store data indicating whether to drop a corresponding one of the data frames,
- a forward-to-management field configured to store data indicating whether to forward the corresponding data frame to a management device,
- a priority field configured to store data indicating whether the DSCP/priority field stores valid priority data, and
- a DSCP field configured to store data indicating whether the DSCP/priority field stores valid DSCP data.

19. (Original) The multiport network device of claim 14, further comprising:

- a port filter configured to apply policy rules to the data frames to identify one or more policy equations corresponding to the data frames.

20. (Original) The multiport network device of claim 19, wherein the decoder is configured to receive the one or more policy equations corresponding to one of the data frames from the port filter, select one of the one or more policy equations, and use the selected policy equation to identify one of the entries in the action memory.

21. (New) A multiport network device, comprising:

- a plurality of input ports configured to receive a plurality of data frames, each of the data frames specifying at least one of a plurality of classes of service;
- a plurality of output ports configured to transmit at least some of the data frames;
- a plurality of priority queues associated with each of the output ports;
- a memory configured to store priority level information corresponding to each of the plurality of classes of service;

an action generator including

- an action memory configured to store a plurality of entries,
- a decoder configured to identify one of the entries in the action memory for each of the data frames, and
- a tag generator configured to generate an action tag based on the entry identified for each of the data frames;

a port vector queue configured to access the memory to identify the priority level information associated with each of the data frames using the action tag from the action generator for the data frame and identify one of the priority queues based on the identified priority level information for the data frame; and

a port filter configured to apply policy rules to the data frames to identify one or more policy equations corresponding to the data frames,

wherein the decoder is configured to receive the one or more policy equations corresponding to one of the data frames from the port filter, select one of the one or more policy equations, and use the selected policy equation to identify one of the entries in the action memory.

22. (New) A system for identifying priority level information for a data frame received by a network device, comprising:

- a plurality of input ports configured to receive a plurality of data frames, each of the received data frames specifying at least one of a plurality of classes of service;
- a memory configured to store priority level information corresponding to each of the plurality of classes of service, wherein the memory includes one of a plurality of registers or a lookup table;
- an action generator configured to generate an action tag for each of the received data frames, wherein the action generator includes:
 - an action memory configured to store a plurality of entries, wherein each of the entries includes:

a differentiated services code point (DSCP)/priority field configured to store one of DSCP data and priority data relating to one of the classes of service,
a deny field configured to store data indicating whether to drop a corresponding one of the received data frames,
a forward-to-management field configured to store data indicating whether to forward the corresponding data frame to a management device,
a priority field configured to store data indicating whether the DSCP/priority field stores valid priority data, and
a DSCP field configured to store data indicating whether the DSCP/priority field stores valid DSCP data,
a decoder configured to identify one of the entries in the action memory in response to the received data frames, and
a tag generator configured to generate the action tags based on the identified entries; and
a port vector queue configured to use the action tag from the action generator for each of the received data frames to access the memory to identify the priority level information associated with the received data frame.